



# PHIN Certification

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# Areas for PHIN Preparedness Certification



Early Event  
Detection

Countermeasure  
and Response  
Administration

Outbreak  
Management

Partner  
Communications  
and  
Alerting

Connecting  
Laboratory  
Systems

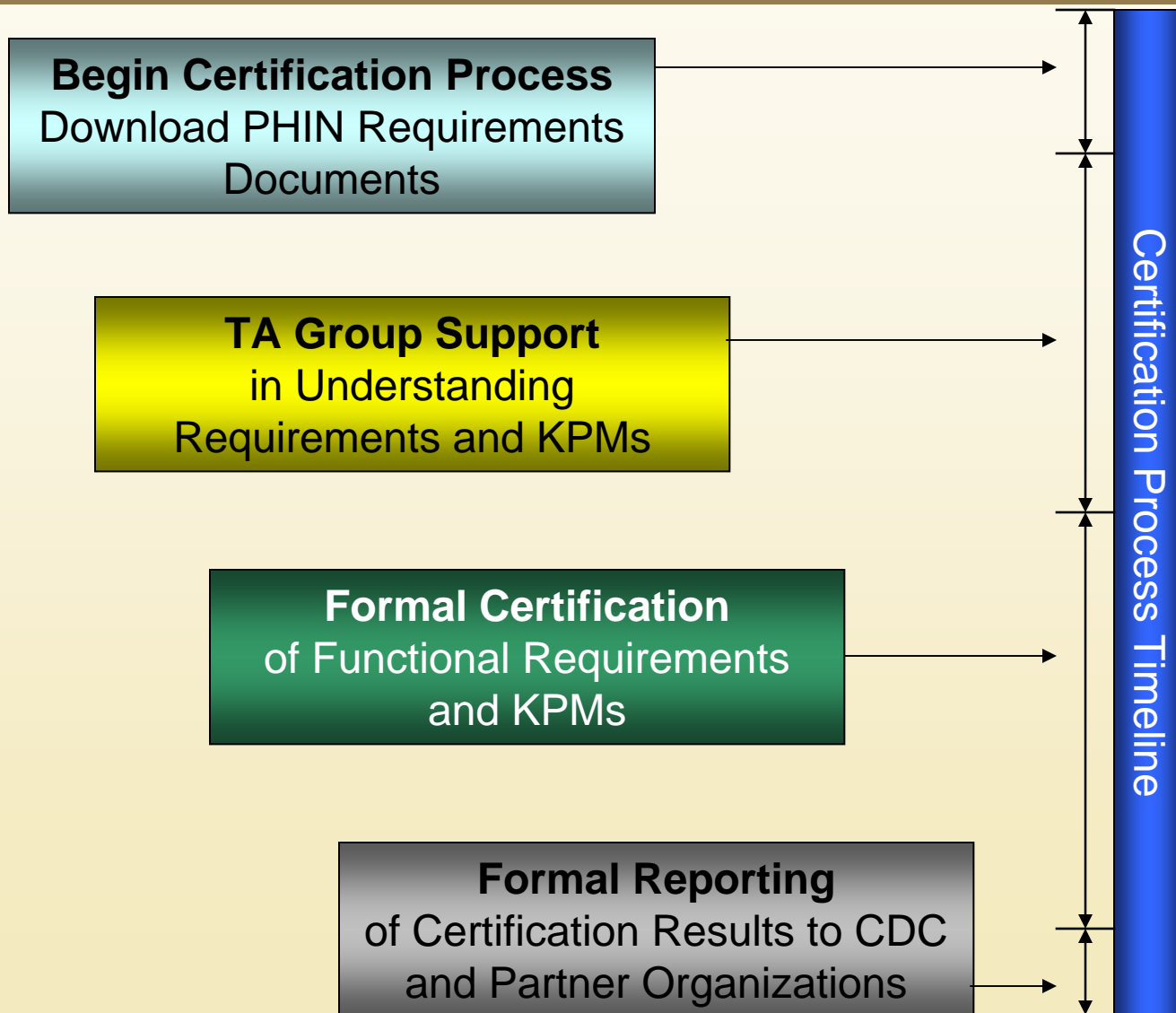
Cross  
Functional  
Components

# Agenda



- *Role of Certification Team*
- *Certification Time Line*
- *Begin Certification Process*
  - Download Documents and Tools from PHIN Website
    - Functional Requirements and FSAT
    - Demo of Self Assessment Tool
    - KPMs, Messaging IGs and Test Scenarios
    - Demo of Online Validation Tool
- *Technical Assistance Group Support*
- *Formal Certification Process*
- *Certification Reporting*

# Certification Time Line



# Begin Certification Process



- ◆ *Download PHIN Documents and Tools*
  - ◆ PHIN Functional Requirements and KPM Documents
  - ◆ Functional Self Assessment Tools
  - ◆ Located at <http://www.cdc.gov/phinf/>
- ◆ *Identify current available solutions*
- ◆ *Determine gaps*
- ◆ *Identify individuals to work on certification*
- ◆ *Determine Questions for TA Group*
- ◆ *Setup conference call with TA Group*



## Certification Team

- *Provide functional self-assessment tools*
- *Provide message validation tools*
- *Provide test scenarios*
- *Conduct formal certification review*
- *Provide assistance with tools*
- *Manage inquiries throughout the certification process*



# Requirements Documents and Self Assessment Tools



## *Functional Requirements Document and Functional Self-assessment Tool*



Functional Requirements Documents are the basis for all Self Assessment tools and the Certification Process



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## **|PHIN Preparedness**

### **OUTBREAK MANAGEMENT FUNCTIONAL REQUIREMENTS**

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Version 1.0  
4/26/2005

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## **2.1 SYSTEM ARCHITECTURE**

2.1.1 Systems designed to support OM must offer configuration flexibility so that new data fields, entities, entity types and relationship types may be added to capture information unique to each particular health event.

2.1.2 Systems supporting OM must support structured data entry for common forms and fields to ensure data integrity, validity, and standardization. A standardized data structure ensures that data mapping of common elements will only be necessary one time, rather than for each event.



Same Information as in the requirements document, but now in a question and answer format.

Outbreak Management Version 1.0 - Based on RSV1.0 of the Requirements Document					
Critical or Non Critical	PHIN Requirement Cross Reference Number	System Architecture: Broad system-level needs, such as flexible configuration, should be addressed by systems supporting OM.	Preferred Validation Method (The Cert Team will describe preferred method by which jurisdiction can demonstrate compliance.) (Examples: Demo; User Manual; Screen Prints)	Does the system perform this function or capture this information? (Answer is Y or N)	Special considerations or special issues or special training needed to perform this function or to capture this information.
Critical? Not Critical?	Tracking #	Requirement	Validation Method	Jurisdiction Captures	Special Considerations
Section 2.1 - System Architecture					
Critical	2.1.1	In order to capture the information unique to each particular event, does the OM solution permit configuration flexibility so that new data fields, entities, and relationships may be added?	Documentation and User Demo	N	
Critical	2.1.2	Does the OM solution support structured data entry for common forms and fields to ensure data integrity, validity, and standardization?	Documentation	N	

# FSAT Summary sheet for Results Reporting



Outbreak Management Version 1.0 - Based on RSV1.0 of the Requirements Document			
FSAT_OM_Ver1.0_Final			
[Type your jurisdiction name here]			
PHIN Functional Specification:		Outbreak Management	
Total % Answered Yes	Critical	Non-Critical	
	0%	0%	
Critical Requirements	% Answered Yes	Number Yes	Number No
System Architecture	0%	0	3
Data Requirements	0%	0	34
Case Investigation	0%	0	10
AVR Generation	0%	0	2
System Integration and Data Exchange	0%	0	5
Operations	0%	0	0
		0	54
Total % - Critical		0%	100%
Non-Critical Requirements	% Answered Yes	Number Yes	Number No
System Architecture	0%	0	4
Data Requirements	0%	0	26
Case Investigation	0%	0	8
AVR Generation	0%	0	10
System Integration and Data Exchange	0%	0	7
Operations	0%	0	6
		0	61
Total % - Non-Critical		0%	100%



## ◆ *Demo – Joseph Esquibel*



- ◆ *Key Performance Measures*
- ◆ *Message Implementation Guides*
- ◆ *Test Scenarios*
- ◆ *Message Validation Tool*

# KPM Certification



- ◆ *Verify Secure Message Transport*
- ◆ *Have ability to create message from PHIN functional solution*
- ◆ *Download KPM Documentation, Message IGs, and Test Scenarios*
- ◆ *As needed, use online message validation tool*
- ◆ *Contact TA group for assistance in understanding documentation and guides*



Document used to  
define the critical  
testable criteria for  
each functional area  
that are called KPMs



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## **PHN Preparedness**

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### **KEY PERFORMANCE MEASURES**

Version 1.0

4/26/2005

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# Excerpt from KPM Document



Identifying the PHIN Functional Areas and the associated KPM for each.

Key Performance Measures

Version: 1.0

#	Performance Measure	PHIN Preparedness Functional Areas					
		EED	OM	CRA	PCA	CLS	CFC
2	Systems must exchange messages for investigations and for exposure contacts in accordance with: with: <ul style="list-style-type: none"> <li>PHIN Investigation and Exposure Notification Message Implementation Guide, available at <a href="http://www.cdc.gov/phn">www.cdc.gov/phn</a>.</li> </ul>		S R				
3	Systems must exchange messages for laboratory results in accordance with: <ul style="list-style-type: none"> <li>PHIN Laboratory Result – Generic Message Implementation Guide, available at <a href="http://www.cdc.gov/phn">www.cdc.gov/phn</a>, and</li> <li>PHIN Laboratory Results – Biological Agent Message Implementation Guide, available at <a href="http://www.cdc.gov/phn">www.cdc.gov/phn</a>.</li> </ul>	R	R			S R	
4	Systems must exchange messages for laboratory test requests in accordance with: <ul style="list-style-type: none"> <li>PHIN Laboratory Test Order Message Implementation Guide, available at <a href="http://www.cdc.gov/phn">www.cdc.gov/phn</a>.</li> </ul>		S			S R	
5	Systems must be able to receive health related data for early event detection purposes including data that are in the following formats: <ul style="list-style-type: none"> <li>PHIN Healthcare Encounter – Chief Complaint Message Implementation Guide, available at <a href="http://www.cdc.gov/phn">www.cdc.gov/phn</a>, and</li> <li>PHIN Healthcare Encounter – Diagnosis Message Implementation Guide, available at <a href="http://www.cdc.gov/phn">www.cdc.gov/phn</a>.</li> </ul>	R					



## Implementation Guide for creation of messages used in the Certification Test Scenarios



PHIN Messaging Standard  
Unsolicited Result Message  
ORU^R01  
HL7 Version 2.5  
Specification Update  
November 2004

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Centers for Disease Control and Prevention

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# Test Scenario Document for Certification



The Test Case  
Scenarios for each  
Functional Area's KPM  
can be found on the  
PHIN website



## **PHIN Preparedness (DRAFT for discussion)**

**Connecting Lab Systems KPM Certification Process and  
Test Scenarios**

Version 1.5\_0420  
4/21/2005



## A. Scenario 1 – Send Laboratory Results (Lab B to Lab A)

Test Scenario Description	Valid Inputs	Expected Outcome
<b>Test DOH Lab outgoing result message</b> <input type="checkbox"/> V.a.1 – The DOH Laboratory will send a Test Results message to a partner laboratory (Certification Team).	<input type="checkbox"/> OUL^R22 ( <b>HL7 v2.5</b> ) message with the following segments using the information supplied ( <i>page 7 &amp; 8</i> ): MSH, PID, SPM, SAC, OBR, ORC, and OBX	<input type="checkbox"/> Partner Lab will Accept OUL^R22 (HL7 v2.5) results message <input type="checkbox"/> Message structure is valid <input type="checkbox"/> Message content is valid <input type="checkbox"/> Vocabulary is valid

# Online Validation Tool




Message Conformance Validation Tool - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Search Favorites Media

Address <http://localhost/cv/validate.do> Go

Links [Apache](#) [BBC](#) [BT Documentation Site](#) [Messaging Vision](#) [CITS Online - Business Office](#) [CDC Unified Process](#) [RUP](#) [Slashdot](#) [SourceForge](#)

**Message Conformance Validation Tool** Admin 

**Validate**  
Upload your message to verify conformance to the indicated message specification.

[Validate](#) [Output](#)

Message File  [Browse...](#)

Specification

[Go](#)

**Information**

This tool allows you to test messages for conformance against various message specifications.

To test a file, Browse or type a filename into the Message File field and select the appropriate Specification to test against.

Further documentation for the listed specifications can be obtained below.

[NNDM](#) - NEDSS Notifiable Disease Message

[NNDMv1.0?](#) - NEDSS Notifiable Disease Message (official ballot version?)

[ORU\\_R01z](#) - Bioterrorism Lab Result

<http://localhost/cv/validate.do#> Local intranet

# Validation Output




Message Conformance Validation Tool - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Media Print Mail News RSS Feeds

Address <http://localhost/cv/validate.do;sessionId=16191A5F4715222E50608FB3507C510C> Go

Links Apache BBC BT Documentation Site Messaging Vision CITS Online - Business Office CDC Unified Process RUP Slashdot SourceForge

**Message Conformance Validation Tool** Admin 

**Validate**  
Upload your message to verify conformance to the indicated message specification.

[Validate](#) [Output](#)

**Validation Results**  
Validation against the NNDM specification: failed

2 errors were found while validating SampleNotification\_invalid.xml.

Please see the output below for detailed information.

Error on line 12, column 10: cvc-complex-type.2.4.a: Invalid content starting with element 'zzzzzz'. One of '{"urn:hl7-org:v3":acceptAckCode}' is expected.

Error on line 26, column 14: cvc-complex-type.2.4.a: Invalid content starting with element 'something'. One of '{"urn:hl7-org:v3":deviceRcv}' is expected.

**Information**

This tool allows you to test messages for conformance against various message specifications.

To test a file, Browse or type a filename into the Message File field and select the appropriate Specification to test against.

Further documentation for the listed specifications can be obtained below.

[NNDM](#) - NEDSS Notifiable Disease Message

[NNDMv1.0?](#) - NEDSS Notifiable Disease Message (official ballot version?)

[ORU\\_R01z](#) - Bioterrorism Lab Result

Done Local intranet



# Message Validation Tool



◆ *Demo*



- ◆ *Work with Partners to understand the PHIN functional requirements*
- ◆ *Help with understanding the KPMs and how to get them implemented*
- ◆ *Explain and help with the implementation of CDC based solutions*

# Formal Certification



- ◆ *Initiate Certification Process*
  - ◆ Send in Self Assessment Form
  - ◆ Request KPM Certification
- ◆ *Validation of PHIN Functional Area Capabilities*
  - ◆ Online Demonstration of solution
  - ◆ Screen Shots
  - ◆ Reports
- ◆ *Demonstrate KPM functionality. For example,*
  - ◆ Send valid message to certification team
  - ◆ Send an alert and confirm its delivery to a specific role
- ◆ *Review and assessment*
  - ◆ Error Resolution
- ◆ *Results presented to jurisdiction for review*
- ◆ *Documentation of certification results*



- ◆ *PHIN Functional Areas*
  - ◆ Certified as Passed or Failed
  - ◆ Progress reported as percent complete
- ◆ *Specific KPMs (Messages and Metrics)*
  - ◆ Certified as Passed or Failed
  - ◆ Progress reported as percent KPMs completed based on PHIN functional area
- ◆ *Certification Status Reports*
  - ◆ Summary and detailed formats
  - ◆ Formal hardcopy can be requested at any time during the process



# Contact Information



## ◆ *Don Nestor*

- ◆ PHINCertification@saic.com
- ◆ (800) 804-9963



# *Questions and Answers*